

## REMARKS

The Office Action dated October 6, 2004, has been received and carefully noted. The above amendments and the following remarks are submitted as a full and complete response thereto.

By this Amendment, claim 1 has been amended and new claims 6-8 have been added. No new matter has been added. Support for the amendments to claim 1 can be found in at least paragraph [0031] of the specification as originally filed. Support for new claims 6-8 can be found in at least paragraphs [0030], [0032] and [0036] of the specification as originally filed. Claims 1-8 are pending and respectfully submitted for consideration.

Claims 1-5 were rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Patent Publication 57-161368 (JP '368). Claims 2-5 depend from claim 1. The Applicant respectfully submits that claims 1-5 recite subject matter that is neither disclosed nor suggested by JP '368.

Claims 1-4 were also rejected under 35 U.S.C. § 102(b) as being anticipated by Pecht et al. (U.S. Patent No. 5,090,712, "Pecht"). Claims 2-4 depend from claim 1. The Applicant respectfully submits that claims 1-4 recite subject matter that is neither disclosed nor suggested by Pecht.

In the present invention, the sliding face disposes annularly arranged dam sections and also annularly arranged dimple sections, each of which are located between the individual dam sections. Dimples are arranged in the individual dimple sections along the circumference and are inclined towards a rotary direction relative to a direction facing the fluid side. Therefore, the dimple sections of the present invention let

the fluid flow over the sliding face, and the dam sections keep back the fluid, such that the fluid is reserved in the dimple sections. Also, the dimple sections exhibit a function of pushing back the fluid on the sliding face towards a fluid reservoir. Thus, frictional resistance of the sliding face is reduced, and the seal performance is improved, as well. In particular, under a circumstance of low fluid pressure or low rotational speed commonly encountered by general machine apparatus, a large number of dimples thus arranged, not only are able to achieve a significant reduction in frictional resistance, but also are able to improve a seal performance.

Furthermore, the sliding face, which could become liable to damage due to a large number of dimples, is prevented from being damaged or worn out owing to a reinforcement provided by the dam section. Durability of the sliding face is thus improved.

To the extent that the rejections remain applicable to the claims currently pending, the Applicant traverses the rejections and respectfully submits that JP '368 and Pecht fail to disclose or suggest all of the claimed features of the invention, and therefore, also fail to provide the critical and non-obvious advantages provided by the invention as discussed below.

With respect to claim 1, the Applicant submits that JP '368 fails to disclose or suggest the claimed features of the invention. Claim 1, as amended, recites that each of said dimples has a long rectangular shape extending along an inclination direction thereof. As a result of the claimed invention, the friction between the sliding faces is decreased. In contrast, in Fig. 2, JP '368 discloses a follower ring 5 having concaves 6 on a sliding face. Each of the dimples 6 of JP '368 has a long elliptical shape.

However, as shown in Fig. 3 of JP '368, none have a long rectangular shape extending along the inclination direction thereof. As a result of the dimple shape in JP '368, the seal effect is relatively small, and friction between seal faces is increased.

Claim 1 also recites a plurality of dam sections having annular forms and being disposed between the dimple sections, and also recites that adjoining dimples arranged along the inclination direction between adjoining dimple sections are divided by one of the annular-shaped dam sections. In contrast, as shown in Fig. 2, the follower ring 5 of JP '368 does not have a plurality of annular-shaped dam sections between the dimple sections. In JP '368, the concaves 6 are arranged randomly and are not divided by one of the annular-shaped dam sections. As a result of the structure of the follower ring 5 of JP '368, the sealed fluid easily leaks inside.

As such, the Applicant respectfully submits that JP '368 fails to disclose or suggest at least the combination of dimples having a long rectangular shape extending along an inclination direction thereof, and adjoining dimples arranged along the inclination direction between adjoining dimple sections being divided by one of the annular-shaped dam sections, and a plurality of dam sections having annular forms and being disposed between the dimple sections, as claimed in amended claim 1.

With respect to amended claim 1, the Applicant submits that Pecht also fails to disclose or suggest the claimed features of the invention. Claim 1, as amended, recites that each of the dimples has a long rectangular shape extending along an inclination direction thereof, and adjoining dimples arranged along the inclination direction between adjoining dimple sections are divided by one of the annular-shaped dam sections.

In Fig. 5, Pecht discloses a ring 76' having polygonal grooved surfaces 94 on a sliding face. Each of the grooved surfaces 94 of Pecht has a diamond shape. However, as shown in Fig. 5, none have a long rectangular shape extending along the inclination direction thereof.

Further, as shown in Fig. 5, the ring 76' of Pecht does not have annular-shaped dam sections between the dimple sections. Furthermore, the grooved surfaces 94 in Pecht are arranged in spiral form and are not divided by one of the annular-shaped dam sections. Therefore, in the ring of Pecht, the sealed fluid easily leaks inside.

As such, Pecht fails to disclose or suggest at least dimples having a long rectangular shape extending along an inclination direction thereof, and adjoining dimples arranged along the inclination direction between adjoining dimple sections are arranged by one of the annular-shaped dam sections, as recited in amended claim 1.

According to U.S. patent practice, a reference must teach every element of a claim in order to properly anticipate the claim under 35 U.S.C. §102. In addition, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628,631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "Every element of the claimed invention must be arranged as in the claim . . . the identical invention, specifically, [t]he identical invention must be shown in as complete detail as contained in the claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236 (Fed. Cir. 1989) (emphasis added).

The Applicant respectfully submits that JP '368 and Pecht do not disclose or suggest at least the combination of features of dimples having a long rectangular shape

extending along an inclination direction thereof, and that adjoining dimples arranged along the inclination direction between adjoining dimple sections are divided by one of the annular-shaped dam sections as recited in the claim. Accordingly, JP '368 and Pecht do not anticipate claim 1, nor is claim 1 obvious in view of JP '368 and Pecht. As such, the Applicant submits that claim 1 is allowable over the cited art.

Claims 2-8 depend from allowable claim 1. The Applicant respectfully submits that these dependent claims are allowable at least because of their dependency from allowable base claim 1.

In view of the above, the Applicant submits that claims 1-8 recite subject matter that is allowable over the cited prior art. Accordingly, the Applicant respectfully requests allowance of claims 1-8 and the prompt issuance of a Notice of Allowability.

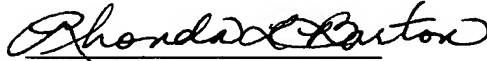
Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper,

may be charged to counsel's Deposit Account No. 01-2300, referencing Attorney Dkt.

**No. 108179-00032.**

Respectfully submitted,



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